

WHAT IS CLAIMED IS

1. An internal broach for internally broaching profiles (12), defined by a bottom (14) and flanks (15, 16), of female serrations of a work piece (8),
5 comprising
- a shank (1), which leads in a direction of broaching (22) and has a central longitudinal axis (9); and
 - a toothed section (2) with several rows (6) of broach cutting teeth (21a to 21f), the rows (6) being disposed successively counter to the direction of broaching (22);
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 - with successive broach cutting teeth (21a to 21f) being allocated to each other for broaching a profile (12) of a depth;
 - with the broach cutting teeth (21a to 21f) having bottom cutting blades (23a to 23f) and first and second sides;
 - 15 -- with the bottom cutting blades (23a to 23f) of successive and associated broach cutting teeth (21a to 21f) having a pitch a relative to the broach cutting teeth (21a to 21f) that lead in the direction of broaching (22);
 - with a bottom-cutting-blade relief surface (24) being allocated to
20 the bottom cutting blades (23a to 23f); and
 - with the first and second sides passing through the bottom-cutting-blade relief surfaces (24) while forming first and second edges;
- wherein the first sides are guide flanks (26a to 26f), with the first edges being guide edges (27a to 27f) without cutting ability;
- 25 wherein the second sides are relieved surfaces (29a to 29c), with the second edges being non-cutting relieved edges (28a to 28f); and
- wherein the bottom cutting blades (23a to 23f) are designed for cutting over a full profile width b.

2. An internal broach according to claim 1, wherein the guide edges (28a to 28f) of successive broach cutting teeth (21a to 21f) have no flank pitch.

3. An internal broach according to claim 1,

5 wherein the broach cutting teeth (21), side by side relative to the direction of broaching (22), are disposed annularly; and wherein broach cutting teeth (21a to 21f), successive counter to the direction of broaching (22), are disposed in rows (6) that are parallel to the central longitudinal axis (9).

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4. An internal broach according to claim 1,

wherein broach cutting teeth (21), side by side relative to the direction of broaching, are disposed helically; and

15 wherein broach cutting teeth (21a to 21f), successive counter to the direction of broaching (22), are disposed in rows (6) that are parallel to the central longitudinal axis (9).

5. An internal broach according to claim 1,

20 wherein the broach cutting teeth (21"), side by side relative to the direction of broaching (22), are disposed annularly; and

wherein the broach cutting teeth (21"a to 21"c), successive counter to the direction of broaching (22), are disposed in twist-style rows (6").

6. An internal broach according to claim 1,

25 wherein the broach cutting teeth (21""), side by side relative to the direction of broaching (22), are disposed helically; and

wherein the broach cutting teeth (21""a to 21""c), successive counter to the direction of broaching (22), are disposed in twist-style rows (6").